Transmitted via Federal Express

August 22, 2001

Bryan Olson EPA Project Coordinator U.S. Environmental Protection Agency EPA New England One Congress Street, Suite 1100 Boston, Massachusetts 02114-2023

Re: GE-Pittsfield/Housatonic River Site
Plant Site 1 Groundwater Management Area (GECD310)
Baseline Groundwater Monitoring Program Update

Dear Mr. Olson:

This letter provides a further update on the General Electric Company's (GE's) groundwater-related activities at the Plant Site 1 Groundwater Management Area (GMA 1). These activities were initially proposed in GE's *Baseline Monitoring Program Proposal for Plant Site 1 Groundwater Management Area* (GMA 1 Baseline Proposal) (September 2000), which was conditionally approved by the U.S. Environmental Protection Agency (EPA) in a letter dated March 20, 2001. On May 18, 2001, GE provided an update letter on these activities, which included certain proposed modifications to the GMA 1 baseline monitoring program. That letter also stated that GE would provide EPA with a further update within 45 days from EPA's approval of that letter proposal. EPA provided conditional approval of that letter proposal by letter of July 9, 2001.

Thereafter, during discussions among GE, EPA, and the Massachusetts Department of Environmental Protection (MDEP), including meetings on July 18 and August 15, 2001, EPA agreed to a number of clarifications and modifications to the conditions in its July 9 letter, and the parties further discussed and agreed to a number of other modifications relating to replacement wells in GMA 1. These clarifications and modifications were documented in a letter to EPA dated August 16, 2001. In accordance with GE's May 18 update letter, the present letter provides a further, overall update on GE's activities at GMA 1, including additional modifications and proposed modifications to that program.

Well Installation/Replacement Activities

GE has completed the installation of all new (i.e., GMA1-## prefix) wells and most of the replacement wells that have been identified as capable of being installed at this time. These wells include GMA1-1 through GMA1-11, P-R, M-R, 25R, QQ-R, and MW-6R, as well as the wells associated with the Upper ½ Mile Reach Removal Action. An update on each of the wells in the GMA 1 program that has required a modification in location or has not yet been installed follows. A map showing the updated locations of all wells in the GMA 1 baseline program is attached as Figure 1.

• Well GMA1-11. As noted in GE's August 16, 2001 letter, EPA's July 9 letter directed GE to install this well (replacement for well 11) in an alternate location in East Street Area 2-North. During the site visit on July 18, an alternate location for this well was agreed upon with EPA's contractor and this well was installed on August 6, 2001.

- Well HR-G3-MW-2. In its May 18 update letter, GE proposed to remove perimeter well ES2-3 from the baseline monitoring program, to be replaced by one of two previously proposed wells to be installed along Cell G3 as part of the Upper ½Mile Reach Removal Action, preferably the westernmost well (HR-G3-MW-2). GE stated that, if that well proved unsuitable for the purposes of the GMA 1 baseline monitoring program, GE would utilize the eastern well at Cell G3 (HR-G3-MW-1), and if both of these wells proved to be unsuitable, GE would install a new well near the location of ES2-3. The Cell G3 wells were installed in early June 2001 and subjected to a month-long, weekly monitoring program to assess groundwater elevations and the presence of NAPL. GE submitted the results of that monitoring to EPA in a letter report dated July 27, 2001. In that report, GE recommended that the previously preferred well, HR-G3-MW-2, be utilized as a substitute for well ES2-3 in the GMA 1 baseline monitoring program. GE also proposed to add all of the recently installed Cell G2 and Cell G3 wells to the GMA 1 NAPL monitoring program to be measured for depth to water and NAPL thickness (if present) on a monthly basis. Upon EPA approval of those proposals, GE will implement these modifications to the GMA 1 groundwater and NAPL monitoring program.
- Well B-2. GE received permission on May 14, 2001 to access the property where well B-1 is located, and later attempted to conduct an inventory/inspection of this well. However, the well was not found and the area where it was assumed to be located was recently paved over. Therefore, in the July 18 meeting, GE discussed plans to install a replacement well (B-1R). During utility clearance activities for that well installation, another existing well, B-2, was found in the vicinity of where the new well was to be installed. GE performed a well inventory/inspection at well B-2 and found it suitable for use as a GW-3 perimeter well. As noted in GE's August 16 letter, GE and EPA have agreed that well B-2 will be substituted for well B-1 in the GMA 1 baseline monitoring program. GE will re-survey well B-2, since a discrepancy was noted among prior site maps depicting the location of that well.
- Well MW-6R. As discussed during the July 18 meeting and documented in GE's August 16 letter, it was agreed that the location of this well would be shifted west of the entrance to the auto dealership for safety purposes and to prevent damage to the well due to traffic entering the property. This well was installed on August 15, 2001.
- Well 37R. As discussed in GE's August 16 letter, the parties agreed during the July 18 site visit that the location of replacement well 37R (along Newell Street between East Street and the River) would be modified to be removed from Newell Street further to the east into an open area between the buildings in this area to allow its use as a GW-2 well. On August 17, GE obtained an access agreement from the owner of the property where well 37R will be located, and it will schedule the installation of that well shortly.
- Well 26R. As also discussed in GE's August 16 letter, it appears that the previously proposed location of replacement well 26R may fall within the footprint of the Future City Recreational Area to be constructed in East Street Area 2-South, given the design modification that are being considered for this recreational area. In that letter, GE noted that, with EPA's concurrence, installation of this well would be delayed until the final design for the Future City Recreational Area is agreed upon by GE and the City of Pittsfield. After further review, GE now proposes to relocate this well approximately 50 feet to the west to allow a more timely installation of the well and also to ensure that it does not obstruct future remediation or construction activities in the Future City Recreational Area.
- <u>Boring RAA13-1.</u> Boring EPA-1 (as identified in EPA's March 20, 2001 conditional approval letter and re-designated as boring RAA13-1) is located on Parcel J9-23-4 in the former oxbow area F

portion of Newell Street Area II. This parcel is currently in the process of being deeded to the City of Pittsfield, and GE has been unable to date to locate the current owner to request access permission. (GE did contact the City and was informed that the City does not yet have title to this property.) Two other borings to till (EPA-2 and EPA-3, re-designated as RAA13-2 and RAA13-3, respectively) were installed without any observed indications of NAPL. Laboratory analytical results from soil samples collected from these borings are attached to this letter as Tables 1 and 2. These results do not show increased PCB concentrations at the till interface (22 feet in RAA13-2 and 24 feet in RAA13-3) that may be indicative of the presence of DNAPL. Although elevated PCB concentrations were noted in the 10- to 15-foot interval at RAA13-2, no indications of NAPL were observed and thus installation of a monitoring well is not warranted at that location. Furthermore, downgradient groundwater monitoring will be conducted at new GW-3 perimeter wells GMA1-8 and GMA1-9. In fact, although downgradient well GMA1-8 was installed as a water table monitoring well, it extends to the till interface and no DNAPL was observed in that boring either. In these circumstances, particularly given the absence of DNAPL in the other till borings in this area, GE does not believe that it is necessary to install a till boring at EPA-1/RAA13-1. Accordingly, GE proposes to eliminate the installation of that till boring from the scope of GMA 1-related activities.

• Wells Within Active Merrill Road Reconstruction Area. Finally, as noted in GE's August 16 letter, certain other proposed replacement wells have been identified as remaining within the active area of the Merrill Road construction or equipment staging areas, and GE and EPA have agreed that these wells cannot be installed at this time. These wells include: 60R, 72R, 31R, and LL-R. GE will continue to monitor construction activities and will endeavor to install these wells as construction is completed. (Obviously, too, the groundwater pump test scheduled for well 72R will be deferred until the installation of that well.)

Former Industrial Supply Well

GE surveyed the location of the former industrial supply well in the 30s Complex as part of the survey performed to support overall RD/RA activities at the 20s, 30s, and 40s Complexes. On July 17, 2001, GE removed surficial apparatus that blocked access to the well head, and on July 20, 2001, it monitored the well for the presence of water and potential obstructions at depth. Water was observed at the top of the well, which is located approximately 10 feet below grade within a subsurface vault/manway. The well is recorded to extend to a depth of 2,004 feet, but was found to be obstructed at a depth of approximately 170 feet. A conceptual well schematic prepared from available information concerning the installation of this well in the 1930s is attached to this letter as Figure 2. The well was uncased from the top of bedrock at 33 feet to a depth of 262 feet, where approximately 100 feet of 12.5-inch casing was installed. This uncased portion of this well may have collapsed, obstructing the well.

GE has initiated discussions with several well drilling firms to identify potential methods to decommission a well of this depth, and will submit a plan for abandoning this well to EPA within 45 days of the date of this letter.

Other Activities

An update on the status of other ongoing or recently completed activities is presented below.

As noted in GE's August 16 letter, based on discussions with EPA concerning the criteria for which
new survey data are required for a monitoring well, GE will re-survey the following existing wells
where a discrepancy of greater than 0.1 feet was noted and surficial damage or heaving was observed:
64, 95-9, ES2-2A, ES2-17, ES1-10, LSSC-18, NS-9, and MM-1. GE will also re-survey wells F-1

and B-2 to address survey questions regarding these wells, and any other wells where the measuring point is altered during the course of maintenance activities.

- GE has re-developed all the existing wells and most of the new wells which will be sampled during the GMA 1 baseline monitoring program. GE will develop the remaining new wells which have yet to be drilled, or only recently been installed, at least one week prior to the fall 2001 sampling event.
- GE has completed the installation of the surface water staff gauges in Silver Lake and in the Housatonic River adjacent to East Street Area 2-South, as proposed in the GMA 1 Baseline Proposal.
- GE has completed hydraulic conductivity testing at 13 GMA 1 wells. Three modifications were made to the list of wells to be tested which was presented in the GMA 1 Baseline Proposal:
 - 1. Well ES1-5 was substituted for well ES1-6, as proposed in GE's May 18 update letter and approved by EPA.
 - 2. Well 17A was tested instead of well GMA1-4, since the latter well was dry on the test date. (Note that well GMA1-4 was installed as a GW-2 monitoring well, but the depth to groundwater in this well has consistently been greater than 15 feet below grade. Therefore, the GW-2 groundwater standards may not be applicable to this portion of East Street Area 2-North. GE will continue to assess the depth to water at this well and may propose to remove this well from the groundwater quality monitoring program.)
 - 3. Well GMA1-7 was tested instead of well ES1-23 because the diameter of well ES1-23 was insufficient to accommodate the transducers used during the hydraulic conductivity testing.

GE will compile the results of this testing and include them in the next baseline groundwater quality interim report.

• GE has initiated the performance of miscellaneous necessary repairs noted during the well inventory and will continue these well maintenance activities. These activities include repair/replacement of well covers, cracked or broken concrete pads and/or well risers. As noted above, GE will also resurvey any wells at which the measuring point elevation is changed during the course of repair work.

Upcoming Activities and Proposed Schedule

In the upcoming weeks, GE will complete the well installation, development, and surveying activities that have not been completed to date, as well as other tasks related to these initial field activities. Specifically, GE will perform the following activities on the following schedule:

- Complete the re-surveying of existing wells where discrepancies were noted, as well as the remaining new wells and staff gauges, within 30 days of the date of this letter.
- Install replacement well 37R within 30 days of the date of this letter.
- Install replacement well 26R within 30 days of the date of this letter, assuming EPA provides timely approval of the proposed modification to the well location.
- Incorporate the Cell G2 monitoring wells (HR-G2-MW-1 through -3, and HR-G2-RW-1) and the Cell G3 monitoring wells (HR-G3-MW-1 and -2, and HR-G2-RW-1) into the GMA 1 monthly

groundwater elevation and NAPL monitoring program upon EPA approval of GE's July 27, 2001 proposal.

- Continue to follow-up with Mass Highway to identify GE's ability to install some or all of the remaining replacement wells in that area without interferences from or to the road construction activities. Upon identifying an accessible location for a given replacement well, GE will notify EPA or Weston of the schedule for installation of that replacement well.
- Prepare a plan to abandon the former industrial supply well in the 30s Complex, as discussed above, and submit the plan for EPA approval within 45 days of the date of this letter.
- Continue to perform well maintenance and rehabilitation activities on an ongoing basis, as the need for such work is identified and scheduled.

GE will verbally provide EPA with an update on the foregoing activities as well as any other issues pertaining to GMA 1 during the informal monthly meetings among GE, EPA, and MDEP. As warranted, GE will formally document the resolution of any issues or disputes in future update letters or in the monthly summary reports for overall activities at the GE-Pittsfield/Housatonic River Site.

Please call John Novotny or me if you have any questions regarding this letter or future activities related to the GMA 1 monitoring program.

Sincerely,

Andrew T. Silfer, P.E. GE Project Coordinator

Enclosures

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Public Information Repositories

GE Internal Repositories



BLASLAND, BOUCK & LEE, INC. engineers & scientists

GENERAL ELECTRIC COMPANY PITTSFIELD, MASSACHUSETTS

NEWELL STREET AREA II

SOIL SAMPLE ANALYTICAL DATA - PCB RESULTS

(Results are presented in dry weight parts per million, ppm)

Sample ID	Depth(Feet)	Date Collected	Aroclor-1248	Aroclor-1254	Aroclor-1260	Total PCBs
RAA13-2	0-1	5/2/01	ND(66)	1100	ND(66)	1100
	1-3	5/2/01	ND(0.041)	1.1	0.33	1.43
	3-6	5/2/01	ND(0.048)	0.027 J	ND(0.048)	0.027 J
	6-10	5/2/01	ND(0.071) [ND(0.070)]	ND(0.071) [0.036 J]	ND(0.071) [ND(0.070)]	ND(0.071) [0.036 J]
	10-15	5/2/01	ND(40)	330	ND(40)	330
	20-22	5/2/01	ND(0.044)	0.30	ND(0.044)	0.30
RAA13-3	0-1	5/2/01	ND(47)	290	ND(47)	290
	1-3	5/2/01	ND(0.042)	0.11	ND(0.042)	0.11
	3-6	5/2/01	ND(0.058)	ND(0.058)	0.042 J	0.042 J
	6-10	5/2/01	ND(0.050)	ND(0.050)	ND(0.050)	ND(0.050)
	10-15	5/2/01	ND(0.043)	0.20	0.17	0.37
	22-24	5/2/01	ND(0.043)	ND(0.043)	0.55	0.55

Notes:

- 1. Samples were collected by Blasland, Bouck & Lee, Inc., and were submitted to CT&E Environmental Services, Inc. for analysis of PCBs.
- 2. ND Analyte was not detected. The number in parentheses is the associated detection limit.
- 3. Duplicate sample results are presented in brackets.
- 4. J Indicates an estimated value less than the practical quantitation limit (PQL).

GENERAL ELECTRIC COMPANY PITTSFIELD, MASSACHUSETTS

NEWELL STREET AREA II

$\mathbf{SOIL} \ \mathbf{SAMPLE} \ \mathbf{ANALYTICAL} \ \mathbf{DATA} - \mathbf{APPENDIX} \ \mathbf{IX} + \mathbf{3} \ \mathbf{RESULTS}$

(Results are presented in dry weight parts per million, ppm)

Sample ID:	RAA13-2	RAA13-3	RAA13-3	RAA13-3
Sample Depth(Feet):	1-3	0-1	3-6	4-6
Parameter Date Collected:	05/02/01	05/02/01	05/02/01	05/02/01
Volatile Organics				
None Detected			NS	
Semivolatile Organics				
Acenaphthene	5.0	ND(0.47) [ND(0.51)]	ND(0.58)	NS
Anthracene	8.5	ND(0.47) [ND(0.51)]	ND(0.58)	NS
Benzo(a)anthracene	9.2	ND(0.47) [ND(0.51)]	ND(0.58)	NS
Benzo(a)pyrene	9.5	ND(0.47) [0.72]	ND(0.58)	NS
Benzo(b)fluoranthene	9.5	0.49 [0.80]	ND(0.58)	NS
Benzo(g,h,i)perylene	5.6	ND(0.47) [0.72]	ND(0.58)	NS
Benzo(k)fluoranthene	7.6	ND(0.47) [0.65]	ND(0.58)	NS
Chrysene	8.7	ND(0.47) [0.67]	ND(0.58)	NS
Dibenzo(a,h)anthracene	1.3	ND(0.94) [ND(1.0)]	ND(1.2)	NS
Dibenzofuran	2.4	ND(0.47) [ND(0.51)]	ND(0.58)	NS
Fluoranthene	19	0.57 [1.0]	ND(0.58)	NS
Fluorene	3.8	ND(0.47) [ND(0.51)]	ND(0.58)	NS
Indeno(1,2,3-cd)pyrene	7.8	ND(0.94) [ND(1.0)]	ND(1.2)	NS
Naphthalene	5.0	ND(0.47) [ND(0.51)]	ND(0.58)	NS
Phenanthrene	19	ND(0.47) [ND(0.51)]	ND(0.58)	NS
Pyrene	17	0.66 [1.2]	ND(0.58)	NS
Furans				
2,3,7,8-TCDF	ND(0.000011)	0.00053 [0.0053]	ND(0.0000088)	NS
ΓCDFs (total)	ND(0.000011)	0.0014 [0.021]	ND(0.0000088)	NS
1,2,3,7,8-PeCDF	0.000058	0.00091 w [0.000036]	ND(0.0000079)	NS
2,3,4,7,8-PeCDF	ND(0.0000083)	0.00046 [0.00011]	ND(0.0000076)	NS
PeCDFs (total)	0.000058	0.0057 [0.0027]	ND(0.0000076)	NS
1,2,3,4,7,8-HxCDF	ND(0.0000089)	ND(0.00013) [0.00082]	ND(0.0000065)	NS
1,2,3,6,7,8-HxCDF	0.0011 I	0.029 I [0.0060 I]	ND(0.0000055)	NS
1,2,3,7,8,9-HxCDF	ND(0.000013)	ND(0.00018) [0.000043 w]	ND(0.0000092)	NS
2,3,4,6,7,8-HxCDF	ND(0.0000092)	0.00019 w [0.00038]	ND(0.0000067)	NS
HxCDFs (total)	0.0012	0.048 [0.025]	ND(0.0000055)	NS
1,2,3,4,6,7,8-HpCDF	0.000024	0.0020 [0.0017]	ND(0.0000044)	NS
1,2,3,4,7,8,9-HpCDF	ND(0.0000067)	0.00026 [0.00059]	ND(0.0000062)	NS
HpCDFs (total)	0.000024	0.0059 [0.0094]	ND(0.0000044)	NS
OCDF	0.000021 w	0.0010 [0.00049]	ND(0.0000097)	NS
Total Furans	0.0013	0.062 [0.059]	ND(0.0000097)	NS
Dioxins				
2,3,7,8-TCDD	ND(0.0000038)	ND(0.000011) [ND(0.000021)]	ND(0.0000072)	NS
TCDDs (total)	ND(0.000011)	ND(0.000011) [0.00052]	ND(0.0000072)	NS
1,2,3,7,8-PeCDD	ND(0.000015)	ND(0.000090) [ND(0.000025)]	ND(0.0000099)	NS
PeCDDs (total)	ND(0.000015)	ND(0.000090) [0.00034]	ND(0.0000099)	NS
1,2,3,4,7,8-HxCDD	ND(0.000013)	ND(0.000040) [0.0000093 w]	ND(0.000010)	NS
1,2,3,6,7,8-HxCDD	ND(0.0000088)	ND(0.000027) [0.0000081 w]	ND(0.0000068)	NS
1,2,3,7,8,9-HxCDD	ND(0.000011)	ND(0.000032) [0.000018]	ND(0.0000082)	NS
HxCDDs (total)	ND(0.0000088)	ND(0.000027) [0.00019]	ND(0.0000068)	NS
1,2,3,4,6,7,8-HpCDD	ND(0.0000066)	0.00011 [0.000076]	ND(0.0000066)	NS
HpCDDs (total)	ND(0.0000066)	0.00011 [0.00016]	ND(0.0000066)	NS
OCDD	0.000025	0.00036 [0.00025]	0.000015 B	NS
Total Dioxins	0.000025	0.00047 [0.0015]	0.000015	NS
Total TEQs (MDEP TEFs)	0.00014	0.0043 [0.0021]	0.000000015	NS
Total TEQs (EPA TEFs)	0.00011	0.0033 [0.0013]	0.000000015	NS

GENERAL ELECTRIC COMPANY PITTSFIELD, MASSACHUSETTS

NEWELL STREET AREA II

SOIL SAMPLE ANALYTICAL DATA - APPENDIX IX + 3 RESULTS

(Results are presented in dry weight parts per million, ppm)

Sample ID:	RAA13-2	RAA13-3	RAA13-3	RAA13-3					
Sample Depth(Feet):	1-3	0-1	3-6	4-6					
Parameter Date Collected:	05/02/01	05/02/01	05/02/01	05/02/01					
Inorganics									
Antimony	ND(11.0)	1.50 J* [ND(13.0)]	ND(16.0)	NS					
Arsenic	7.10 J*	13.0 J* [11.0 J*]	5.00 J*	NS					
Barium	25.0 J*	60.0 [55.0]	39.0 J*	NS					
Beryllium	0.250	0.360 [0.310]	0.400	NS					
Cadmium	ND(1.80)	0.140 J* [ND(2.10)]	ND(2.60)	NS					
Chromium	7.00	16.0 [14.0]	12.0	NS					
Cobalt	9.60	14.0 [11.0]	8.90 J*	NS					
Copper	22.0	61.0 [54.0]	18.0 J*	NS					
Cyanide	ND(1.00)	ND(1.00) [0.0590 J*]	ND(1.00)	NS					
Lead	15.0	140 [120]	13.0	NS					
Mercury	ND(0.250)	0.350 [0.360]	ND(0.350)	NS					
Nickel	15.0	26.0 [22.0]	15.0	NS					
Selenium	ND(0.920)	0.900 J* [ND(1.00)]	ND(1.30)	NS					
Sulfide	20.0	16.0 [27.0]	94.0	NS					
Thallium	1.00 J*	1.50 J* [1.30 J*]	ND(2.60)	NS					
Tin	ND(9.20)	7.80 J* [7.70 J*]	5.10 J*	NS					
Vanadium	9.80	19.0 [17.0]	12.0 J*	NS					
Zinc	50.0	160 [130]	59.0	NS					

Notes

- 1. Samples were collected by Blasland, Bouck & Lee, Inc., and were submitted to CT&E Environmental Services, Inc. for analysis of Appendix IX+3 constituents (excluding pesticides ad herbicides).
- 2. ND Analyte was not detected. The number in parentheses is the associated quantitation limit for volatiles and semivolatiles and the associated detection limit for other constituents.
- 3. With the exception of dioxin/furans, only those constituents detected in at least one sample are summarized.
- 4 J* Indicates an estimated value between the instrument detection limit and practical quantitation limit (PQL).
- 5. Duplicate sample results are presented in brackets.
- 6 B Analyte was also detected in the associated method blank.
- 7. I Polychlorinated Diphenyl Ether (PCDPE) Interference.
- 8. w Estimated maximum possible concentration.
- 9. Total dioxins/furans determined as the sum of the total homolog concentrations; non-detect values considered as zero.
- 10. Total 2,3,7,8-TCDD toxicity equivalents (TEQs) were calculated using Toxicity Equivalency Factors (TEFs) derived by the World Health Organization (WHO) and published by Van den Berg et al. *In Environmental Health Perspectives* 106(2), December 1998, per technical Attachment F to the SOW.
- 11. -- Indicates that all analytes for a parameter group (e.g., volatiles) are not detected.
- 12. NS Not Sampled Parameter was not requested on sample chain of custody form.



BLASLAND, BOUCK & LEE, INC. engineers & scientists



